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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, UT 84111			EXAMINER PHAN, HANH	
			ART UNIT 2613	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/629,301

Applicant(s)

ARONSON ET AL

Examiner

Hanh Phan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 8-13, 16-37 and 39-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4, 8-13, 24-37 and 39-43 is/are allowed.
- 6) ☒ Claim(s) 16-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 08/01/2008.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature "the receiver eye opener circuitry including at least two retiming and reshaping data paths for the serial electrical data stream" specified in the claims 17 and 23 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 17-21 and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 17 and 23, the phrase **"the receiver eye opener circuitry including at least two retiming and reshaping data paths for the serial electrical data stream"** was not described in the specification.

In claim 18, the phrase **"each data path comprises: clock and data recovery (CDR) circuitry"** was not described in the specification.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 17-21 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 17 and 23, the phrase **"the receiver eye opener circuitry including at least two retiming and reshaping data paths for the serial electrical data stream"**

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is not clear. How a receiver eye opener circuitry has two retiming and reshaping data paths.

In claim 18, the phrase **"each data path comprises: clock and data recovery (CDR) circuitry"** is not clear. How a receiver eye opener circuitry has two clock and data recovery (CDR) circuitry.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jiang et al (US Patent No. 6,665,498) in view of Marmur (US Patent No. 6,832,052).

Regarding claims 16 and 22, referring to Figure 2, Jiang et al teaches an integrated circuit (i.e., ASIC 212 in a transceiver) for use in a transceiver module, the integrated circuit (ASIC 212) comprising:

first means for retiming and reshaping a received first serial electrical data stream (i.e., an electrical input port receiving a serial electrical data stream from photodiode 216, and ASIC 212 for retiming and reshaping the first serial electrical data stream, Fig. 2, col. 3, lines 34-67, col. 4, lines 1-67 and col. 5, lines 1-48);

means (i.e., ASIC 212, Fig. 2) for transmitting the retimed and reshaped first serial electrical data stream to external from the integrated circuit (i.e., Fig. 2, col. 3, lines 34-67, col. 4, lines 1-67 and col. 5, lines 1-48);

means (i.e., ASIC 212, Fig. 2) for receiving a second serial electrical data stream from external to the integrated circuit (i.e., Fig. 2, col. 3, lines 34-67, col. 4, lines 1-67 and col. 5, lines 1-48); and

second means (i.e., ASIC 212) for retiming and reshaping the second serial electrical data stream (i.e., Fig. 2, col. 3, lines 34-67, col. 4, lines 1-67 and col. 5, lines 1-48).

Jiang et al differs from claims 16 and 22 in that he does not specifically teach means for switchably selecting, based on at least one of a loss of lock (LOL) signal and a loss of signal (LOS) signal, a bypass data path to the means for transmitting to bypass retiming and reshaping of the first serial electrical data stream. However, Marmur teaches a receiver bypass circuitry for switchably selecting, based on a loss of signal (LOS) signal, a bypass data path to the means for transmitting to bypass retiming and reshaping of the first serial electrical data stream (i.e., Figures 1 and 2, col. 2, lines 45-67 and col. 3, lines 1-46). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the receiver bypass circuitry for switchably selecting, based on a loss of signal (LOS) signal, a bypass data path to the means for transmitting to bypass retiming and reshaping of the first serial electrical data stream as taught by Marmur in the system of Jiang et al. One of ordinary skill in the art would have been motivated to do this since allowing

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performance monitoring of optical signals of different transmission protocols at one or more different bit rates.

9. Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wall et al (US Patent No. 7,308,060) in view of Marmur (US Patent No. 6,832,052).

Regarding claims 16 and 22, referring to Figure 1, Wall et al teaches an integrated circuit for use in a transceiver module, the integrated circuit comprising:

first means (i.e., eye opener 32, Fig. 1) for retiming and reshaping a received first serial electrical data stream (i.e., Fig. 1, col. 3, col. 5, lines 26-67, col. 6, lines 1-67 and col. 7, lines 1-22);

means (i.e., eye opener 32, Fig. 1) for transmitting the retimed and reshaped first serial electrical data stream to external from the integrated circuit (i.e., Fig. 1, col. 5, lines 26-67, col. 6, lines 1-67 and col. 7, lines 1-22);

means (i.e., eye opener 20, Fig. 1) for receiving a second serial electrical data stream from external to the integrated circuit (i.e., Fig. 1, col. 5, lines 26-67, col. 6, lines 1-67 and col. 7, lines 1-22); and

second means (i.e., eye opener 20, Fig. 1) for retiming and reshaping the second serial electrical data stream (i.e., Fig. 1, col. 5, lines 26-67, col. 6, lines 1-67 and col. 7, lines 1-22).

Wall et al differs from claims 16 and 22 in that he does not specifically teach means for switchably selecting, based on at least one of a loss of lock (LOL) signal and a loss of signal (LOS) signal, a bypass data path to the means for transmitting to bypass retiming and reshaping of the first serial electrical data stream. However, Marmur

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teaches a receiver bypass circuitry for switchably selecting, based on a loss of signal (LOS) signal, a bypass data path to the means for transmitting to bypass retiming and reshaping of the first serial electrical data stream (i.e., Figures 1 and 2, col. 2, lines 45-67 and col. 3, lines 1-46). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the receiver bypass circuitry for switchably selecting, based on a loss of signal (LOS) signal, a bypass data path to the means for transmitting to bypass retiming and reshaping of the first serial electrical data stream as taught by Marmur in the system of Wall et al. One of ordinary skill in the art would have been motivated to do this since allowing performance monitoring of optical signals of different transmission protocols at one or more different bit rates.

Allowable Subject Matter

10. Claims 1-4, 8-13, 24-37 and 39-43 are allowed .

Response to Arguments

11. Applicant's arguments filed 08/01/2008 have been fully considered but they are not persuasive.

The applicant's arguments to claims 16-23 are not persuasive. The independent claims 16 and 22 are now amended to include the limitation of **"means for switchably selecting, based on at least one of a loss of lock (LOL) signal and a loss of signal (LOS) signal, a bypass data path to the means for transmitting to bypass retiming and reshaping of the first serial electrical data stream"** and the applicant argues that

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the cited reference (Marmur) fails to teach such limitation. The examiner respectfully disagrees. As indicated in Figure 1, Marmur teaches O/E receiver module 11 converts an optical signal to an electrical signal, and provides an Loss of Signal (LOS) signal to the FPGA control module 12. The FPGA control module 12 sets the selector 14 to the main path 16 or to the bypass path 22. Also, CDR unit 17 provides a data Loss of Signal (LOS) signal to the FPGA control module 12 in the event that no data signal (i.e., col. 2, lines 45-67 and col. 3, lines 1-46).

Therefore, it believed that the limitations of claims 16 and 22 are still met by the combination of Jiang et al and Marmur or the combination of Wall et al and Marmur, and the rejection is still maintained.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

/Hanh Phan/

Primary Examiner, Art Unit 2613